

SKILLS FRAMEWORK FOR AEROSPACE				
SKILLS MAP - Engineering Service Engineer/Technical Service Engineer (Aircraft Engine / Component Maintenance)				
Sector	Aerospace			
Track	Aircraft Engine / Component Maintenance			
Occupation	Engineer			
Job Role	Engineering Service Engineer/Technical Service Engineer (Aircraft Engine / Component Maintenance)			
Job Role Description	<p>The Engineering Service Engineer/Technical Service Engineer (Aircraft Engine / Component Maintenance) defines scope of maintenance works based on customer requirements and provides feedback to customers on troubleshooting procedures and maintenance recommendations. He/She develops special process control plans and designs engineering solutions to resolve technical issues. He conducts inspections and functional checks for conformance of maintenance works to technical specifications and verifies technical reports and documentation.</p> <p>He ensures compliance with airworthiness and legislative requirements and organisation's safety, health and quality systems. He identifies opportunities for continuous improvement through data analytics, research and innovation, and implements lean and sustainability practices in aircraft engine and component maintenance. He monitors staff performance and is expected to provide technical guidance to technicians.</p> <p>He is required to work in an office environment and provide troubleshooting assistance on site when necessary. He should possess strong technical know-how, analytical and problem-solving skills, and should be adaptable to changing customer requirements.</p>			
Critical Work Functions and Key Tasks / Performance Expectations	Critical Work Functions	Key Tasks	Performance Expectations (For legislated / regulated occupations)*	
	Manage engine and component maintenance programmes	Define scope of maintenance works based on customer requirements	In accordance with: • International Civil Aviation Organisation (ICAO) legislation • Air Navigation Order (ANO) • Singapore Airworthiness Requirements (SAR) • Workplace Safety and Health (WSH) Act • Environmental standards • Aerospace quality management system standards • ISO, AN, MS, NAS and MIL standards • Air Transport Association of America (ATA) standards • Special process standards *Performance Expectations are non-exhaustive and subject to prevailing regulations	
		Generate bill of materials (BOM) as per maintenance requirements		
		Provide feedback to customers on troubleshooting procedures and maintenance recommendations		
	Conduct engine and component maintenance, repair and overhaul (MRO)	Identify improvements to engine and component maintenance and repair capabilities		
		Conduct post-maintenance inspections and functional checks for conformance to technical specifications and airworthiness directives		
		Liaise with original equipment manufacturers (OEM) and customers for failure investigations		
		Design engineering solutions to resolve technical issues		
	Conform to management system requirements	Develop special process control plans		
		Verify technical reports and documentation for engine and component MRO activities		
		Ensure adherence of engine and component maintenance operations to standard operating procedures (SOPs)		
		Ensure compliance with legislative requirements and airworthiness standards		
		Enforce conformance to environment, safety and health systems, policies and procedures		
	Contribute to continuous improvement	Implement organisational quality and risk management systems		
		Implement sustainability practices for engine and component maintenance		
Identify opportunities for continuous improvement projects				
Implement lean practices for engine and component maintenance				
Manage people and organisational development	Contribute to research on market trends and technology applications to drive innovation			
	Analyse data for identification of operational and business insights			
	Communicate with team members and customers to ensure smooth day-to-day operations			
	Monitor staff performance			
	Provide technical guidance to peers and junior team members			
Technical Skills and Competencies	Technical Skills and Competencies		Generic Skills and Competencies	
	Aerodynamics Principles Application	Level 3	Problem Solving	Intermediate
	Aerospace Heat Treatment Process	Level 3	Service Orientation	Intermediate
	Aerospace Maintenance Practices Application	Level 3	Sense-Making	Advanced
	Aerospace Materials and Hardware Selection	Level 3	Decision Making	Basic
	Augmented Reality Application	Level 2	Interpersonal Skills	Intermediate
	Automated System Design	Level 3		
	Aviation Legislation Compliance	Level 3		
	Business Negotiation	Level 3		
	Business Opportunities Development	Level 2		
	Chemical Processing	Level 3		

Skills & Competencies	Coating	Level 3		
	Condition-based Assets Monitoring Management	Level 3		
	Continuous Process Improvement	Level 3		
	Digital Techniques Application	Level 3		
	Elastomer Seals Application	Level 3		
	Electrical Fundamentals Application	Level 3		
	Electronic Fundamentals Application	Level 3		
	Engineering Drawing Interpretation and Management	Level 3		
	Engineering Problem Solving	Level 4		
	Gas Turbine Engine Principles Application	Level 3		
	Helicopter Aerodynamics, Structures and Systems Principles Application	Level 3		
	Human Factors Application and Error Management	Level 3		
	Internet of Things Implementation	Level 3		
	Knowledge Management	Level 3		
	Lean Manufacturing	Level 2		
	Maintenance Coordination	Level 3		
	Mathematical Concepts Application	Level 3		
	Physics Concepts Application	Level 3		
	Piston Aeroplane Aerodynamics, Structures and Systems Principles Application	Level 3		
	Piston Engine Principles Application	Level 3		
	Propeller Principles Application	Level 3		
	Propulsion Principles Application	Level 3		
	Quality System Management	Level 3		
	Robotics and Automation Application	Level 3		
	Sealants Process	Level 3		
	Surface Enhancement	Level 3		
	Surface Preparation and Protection for Aerospace Manufacturing	Level 3		
	Turbine Aeroplane Aerodynamics, Structures and Systems Principles Application	Level 3		
	Welding Process	Level 3		
	Workplace Safety and Health Framework Development and Implementation	Level 3		
Workshop Practices Application	Level 2			
Programme Listing	For a list of training programmes available for the Aerospace sector, please visit < https://www.skillsfuture.sg/skills-framework/aero >			

The information contained in this